Amendments to the Specification:

Replace the paragraph beginning on page 23, line 2 with the following amended paragraph.

FIGURE [[1]]1A, 1B and 1C are a graphical representation of the dimensions of a cyclodextrin molecule without derivatization. The central pore comprises the hydrophilic space, central pore or volume within the cyclodextrin molecule that can act as a site for absorbing a permeant or such contaminant. In the FIGURE, α, β, or γ-cyclodextrin is shown. Such cyclodextrins have hydroxyl groups formed on the perimeter of the molecule that are available for reaction with anhydride and epoxide groups on functionalized polyolefins.

Delete paragraphs beginning on page 23, line 9 through page 23, line 17 as follows:

~~FIGURE 2 is a micrograph of a molded coupon of NA-204 (LDPE). FIGURE 3 is a micrograph of a molded coupon of NA-204 (LDPE) compounded with 2.78 wt% alpha cyclodextrin.~~

~~FIGURE 4 is a micrograph of a molded coupon of NA-204 (LDPE) compounded with 3.30 wt% beta cyclodextrin.~~

~~FIGURE 5 is a micrograph of a molded coupon of PX-175 compounded with 2.78 wt% alpha cyclodextrin.~~

~~FIGURE 6 is a micrograph of a molded coupon of PX-175 compounded with 2.78 wt% beta cyclodextrin.~~

Replace the paragraph beginning on page 23, line 18 with the following amended paragraph.

FIGURE [[7]]2 is a schematic for an Organic Vapor Closed-Volume Static Permeation Cell.

Replace the paragraph beginning on page 23, line 20 with the following amended paragraph.

FIGURE [[8]]3 is a drawing of a closed-volume permeation profile.

Replace the paragraph beginning on page 25, line 16 with the following amended paragraph.

The microscopic examination was used to visually check for compatibility between the polyethylene resin and cyclodextrin. The results show both alpha and beta cyclodextrin compounded into LDPE resin and molded into thin translucent coupons produce agglomerates and particles in the polymer matrix that are visible by microscopic examination ~~(FIGURES 3 and 4)~~. The microscopic results for alpha and beta cyclodextrin compounded on a stoichiometric weight basis into an anhydride functionalized LDPE resin and molded into thin translucent coupons produce no microscopic agglomerates or particles ~~(FIGURES 4 and 5)~~. The functionalized polyolefin/CD materials show the same clarity as the LDPE resin ~~(FIGURE 2)~~.

Replace the paragraph beginning on page 42, line 2 with the following amended paragraph.

Permeation across a barrier can be explained where the membrane at time (t_0) is initially free from permeant vapor. The penetrant pressure p_2 at the upstream face of the membrane is increased giving a concentration in the surface layer c_2. Diffusion is a measure of how quickly permeants move in a membrane across the concentration gradient and the time it takes to reach steady state. The downstream pressure, p_1, while measurable, is negligible at small times relative to the upstream pressure p_2. The amount of vapor permeating the film increases linearly with time once steady state has been reached. At large times, the upstream pressure p_2 will equal the downstream pressure p_1. An illustrative transition profile is provided in FIGURE [[8]]3.

Replace the paragraph beginning on page 42, line 11 with the following amended paragraph.

The second objective is to show that a compatible cyclodextrin dispersed into PE then formed into a membrane retards organic vapor transport and reduces mass flux as measured in the static test cell in FIGURE [[7]]2. Two experimental membranes are tested. The effect of cyclodextrin is measured in a monolayer liner composition membrane at diffusion time (t) when $p_2 = p_1$ with TCA.

Replace the paragraph beginning on page 44, line 13 with the following amended paragraph.

Disc samples (0.10 cm thick x 1.27 cm diameter and weighing 128 mg) are tested in a closed-volume vapor permeation device (refer to FIGURE [[7]]2). The experimental aluminum measurement cell has two compartments (i.e., cells) separated by the disc under study (effective disc area = 5.3 cm^2) and capped at both ends using Teflon® faced butyl rubber septa and aluminum crimp-tops.

Replace the paragraph beginning on page 45, line 18 with the following amended paragraph.

HRGC operated with an ECD is used to measure the change in the cumulative trichloroanisole concentration at time $t_{½}$ in the upstream cell. An illustrative closed-volume static permeation profile is provided in FIGURE [[8]]3. At the end of 6-hours, a sample is collected by solid phase microextraction (SPME) from the upper cell and analyzed by HRGC/ECD. The trichloroanisole concentration is determined from calibration standards and measured in pL / L or parts per trillion (vol./vol.) using gas laws. Test cells are prepared and analyzed in triplicate. Table 8 contains the concentration p_2 of TCA in the lower cell at t=0, and the concentration p_1 of TCA in the upper cell at time $t_{½}$ or 6-hours in the control and the triacetyl gamma cyclodextrin (TA-γ-CD) sample at two loadings.